

SILICON TRANSISTOR 2SC3588-Z

NPN SILICON TRIPLE DIFFUSED TRANSISTOR MP-3

DESCRIPTION

2SC3588-Z is designed for High Voltage Switching, especially in Hybrid Integrated Circuits.

FEATURES

- High Voltage $V_{CE0} \approx 400$ V
- Complement to 2SA1400-Z

QUALITY GRADE

Standard

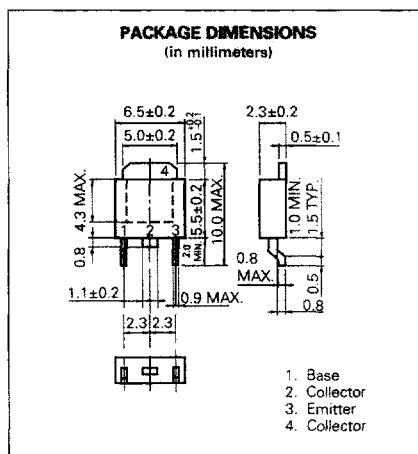
Please refer to "Quality grade on NEC Semiconductor Devices" (Document number IEI-1209) published by NEC Corporation to know the specification of quality grade on the devices and its recommended applications.

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Collector to Base Voltage	V_{CB0}	500	V
Collector to Emitter Voltage	V_{CE0}	400	V
Emitter to Base Voltage	V_{EB0}	7	V
Collector Current (DC)	I_c	0.5	A
Collector Current (Pulse)*	I_c	1.0	A
Total Power Dissipation ($T_a = 25^\circ\text{C}$)**	P_T	2.0	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* $PW \leq 10$ ms, Duty Cycle ≤ 50 %

** When mounted on ceramic substrate of $7.5\text{ cm}^2 \times 0.7\text{ mm}$



ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I _{CBO}			10	μA	V _{CB} = 400 V, I _E = 0
Emitter Cutoff Current	I _{EB0}			10	μA	V _{EB} = 5.0 V, I _C = 0
DC Current Gain	h _{FE1} *	20	42	80		V _{CE} = 5.0 V, I _C = 50 mA
DC Current Gain	h _{FE2} *	10	20			V _{CE} = 5.0 V, I _C = 300 mA
Collector Saturation Voltage	V _{CE(sat)} *		0.2	0.5	V	I _C = 300 mA, I _B = 60 mA
Base Saturation Voltage	V _{BE(sat)} *		0.85	1.0	V	I _C = 300 mA, I _B = 60 mA
Turn-on Time	t _{on}		0.12	1.0	μs	I _C = 0.3 A, R _L = 500 Ω
Storage Time	t _{stg}		2.0	2.5	μs	V _{CC} = 150 V, P _W = 50 μs I _{B1} = -I _{B2} = 0.06 A
Fall Time	t _f		0.35	1.0	μs	Duty Cycle ≤ 2 %

* Pulsed: P_W ≤ 350 μs, Duty Cycle ≤ 2 %

h_{FE} Classification

MARKING	M	L	K
h _{FE1}	20 to 40	30 to 60	40 to 80

TYPICAL CHARACTERISTICS (T_a = 25 °C)

